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NAT. HIST. MUSEUM, MELBOURNE



∴ Tasmanian ∴
Field Naturalists' Club



EASTER CAMP
1919
TO EAGLEHAWK NECK
TASMANIA



GENERAL REPORT

BY CLIVE E. LORD, Hon. Secretary

BOTANICAL NOTES

BY L. RODWAY, C.M.G., Government Botanist

GEOLOGICAL NOTES

BY W. H. CLEMES, B.A., B.Sc.

ORNITHOLOGICAL NOTES

BY CLIVE E. LORD, R.A.O.U.



SOME OF THE MEMBERS WHO ATTENDED THE CAMP.

NATIONAL MUSEUM WASHINGTON

LIST OF CAMP MEMBERS

MR. W. ABBOTT.	MR. C. LORD.
MISS O. BARNARD.	MISS A. MONTGOMERY.
MISS B. BAYLY.	MISS J. PETERSON.
MISS M. BAYLY.	MISS E. POCKOCK.
MISS M. BROWNELL.	MRS. J. REID.
MR. J. CATO.	MISS A. REID.
MR. C. CHERMELL.	MR. L. REVILL.
MR. S. CRANE.	MR. L. F. REYNOLDS.
MR. H. CRAIKE.	MISS A. ROWNTREE.
MR. E. CRUICKSHANK.	MISS F. ROWNTREE.
MR. T. DAVERN.	MR. L. RODWAY.
MISS A. DIFFORD.	MISS M. SAGASSAR.
MR. A. E. FAWDRY.	MISS E. SAGASSAR.
MR. H. GREUBER.	MR. G. O. SMITH.
MISS K. HAY.	MR. R. STOPS.
MR. E. HERITAGE.	MR. WALTER TAYLOR.
MR. F. HEYWARD.	MRS. WALTER TAYLOR.
MISS J. KNIGHT.	MR. J. WALFORD.

ASSISTANTS

MR. W. WOODWARD.
MR. V. MOLROSS.
MR. E. WOODWARD.



AT BREAKFAST.



THE PHOTOGRAPHER "SNAPPED."

Tasmanian Field Naturalists' Club

EASTER CAMP-OUT, 1919

By Clive E. Lord, Hon. Secretary

Since the formation of the Tasmanian Field Naturalists' Club in 1904, excursions into that interesting realm of nature, "the bush," have always been prominent features of the club's activities. As the club grew, the seashore and later the floor of the ocean itself were added to the collecting grounds of the members. In pre-war days we used to charter a large coastal steamer, and sail away to the eastward. The camp would be pitched amid the pine fringed granite coasts of Freycinet Peninsula, or some such beauty spot, and our vessel used for making excursions, or for the purpose of dredging specimens from Neptune's garden. In 1914 one hundred members formed the camp at Wineglass Bay, but since that time the war cloud has overshadowed all things. It was considered advisable to keep the club's activities in working order, however, and for the past few years smaller camps have been held at places nearer home. This year it was resolved to visit Eaglehawk Neck, which had been previously visited in 1916, and when all arrangements were complete, it was found that the camping party would number forty members. As in previous years, an advance party left in order to prepare the camp for the main body. Accordingly on Wednesday morning, April 16, a few members in charge of all the camp impedimenta left Hobart by the s.s. Cartela, and arrived at Eaglehawk Neck at lunch time. Here the numerous packages and articles indispensable to a camp were loaded on to waggons and conveyed to the camp site. Owing to the kindness of Mr. Clemes, this was on his property, Pendennis. An open clearing surrounded by scrub and tall eucalypts was the chosen spot, and as it was in close proximity to the beach, and a running creek supplied the camp with water, it was an almost ideal base upon which to found a camp. A start was immediately made to erect the tents, and a proportion of our labours was accomplished when darkness fell, and we assembled

around the camp fire to enjoy a well earned meal. Next morning the autumn sun shone brightly, and after courting Neptune we continued the work of constructing the miniature village, and this took most of the day.

Eaglehawk Neck has an interesting history. As is well known, it is chiefly noted for being the only gateway to Governor Arthur's "Natural Penitentiary" of Tasman's Peninsula. Its connection with the convict era will ever remain, but apart from this it has historical surroundings of earlier date, and these, together with the natural wonders of Tasman's Arch, the Tessellated Pavement, and the Blowhole, will forever entwine the charm of romance with the other beauties of this locality. Along this rugged (except for exceptional intervals, such as Eaglehawk Neck) section of the coast, Tasman first sailed his ships in November, 1642, and made known to the world the existence of a portion of Terra Australis. His ships were anchored a few miles to the north of the Neck. Here, too, in 1772, came the ill-fated Marion du Fresne, and it was on this voyage that the Tasmanian aboriginals were first met with, and, alas, some killed. The third European, as far as our present day records are aware, and the first British navigator to sail along this section, was Captain Furneaux, in 1773, and in 1777 Captain Cook himself sailed by. The next visitor was Captain Bligh, in the *Bounty*, in 1788, during the course of his ill-fated expedition. He visited the island again in 1792, when on a second and more successful expedition in quest of the bread fruit trees of Tahiti. In 1789 came Captain Cox, in the *Mercury*, and it was he who drew up the first chart of Maria Island. The exploring work of the French Admiral, Bruni D'Entrecasteaux, in 1792, and again in 1793, did much to advance the knowledge of Tasmanian geography. Commodore Sir John Hayes, who visited the island in 1793, spent most of his time in the Derwent estuary. It was not until the summer



THE DINING TENT.



A PICNIC PARTY.

of 1798-99 that Tasmania, or as it was then known, Van Diemen's Land, was first circumnavigated by Bass and Flinders in their 25-ton sloop the *Norfolk*. As far as the East Coast is concerned, the first detailed surveys were carried out by the French during Baudin's expedition in 1802. It was owing to the attention being paid to this portion of the great Southern Continent by the French which caused the first settlement of the English on the Derwent on September 7, 1803. From the foregoing it will be seen that the south-eastern portion of Tasmania's coast line has an interesting history, and when we pitched our camp amidst the eucalypts, on a knoll overlooking a long section of the coast, it is not to be wondered at that we let our thoughts revert to days gone by.

We dwell in the present, however, and the arrival of the main party at 11 o'clock on Thursday evening gave an animated appearance to the camp. From now onward the camp was in full swing. We were particularly fortunate as regards the weather. Each day was a splendid example of Tasmania's autumn at its best. A grey dawn gave place to radiant sunshine, which gilded the fore-shore, and caused the breaking rollers to merge into millions of glittering gems of light. Neptune's clement called forth the campers, and the majority participated in aquatic evolutions until the sound of the breakfast gong echoed through the forest. Before long a general assembly took place under the large dining tent, and full justice was done to the first meal of the day. Plans would then be made for the excursions, and soon various parties, carrying well-filled kn bags, containing the midday meal, would be seen leaving the camp. Some would be bent upon collecting natural history specimens, others on securing photographs, while many went forth in the full enjoyment of the open air life to enjoy a day amid the beauties of nature. All places were visited. Some preferred the surge of the sea and the towering storm-cleft cliffs, some the wooded hillsides and the rocky mountain crags, while others wended their way to the romantic fern gullies, where the beeches and dick-onias met overhead and formed an emerald dome.

To the north of the bay there was the Tessellated Pavement, Fitzroy Glen, and other places well worthy of visiting. To the south, within a mile or so of the camp, were the Blowhole, Tasman's Arch, the Devil's Kitchen, and Fossil Island; while further south was Waterfall Bay and The Pinnacle. Behind the camp rose Cash's Lookout, and it was from here that many of the campers used to spend pleasant hours in observ-

ing the panorama spread at the base of the hill, and rolling away into the dim distance until the blue tones of the sea and sky merged into one, or the grey shades of the inland mountains were absorbed by the clouds. As the campers boiled their billys among such surroundings as these, it is little to be wondered at that they should desire to know something of the early history of the locality, and that such should be asked for and given in impromptu talks by those who chanced to be conversant with it.

With clear autumn skies and scarcely a ripple on the water for the whole period of the camp, it was only natural that every advantage should be taken of the beautiful weather and excursions made to the numerous places of interest. Here all sections found much to admire, while the more scientific members pursued their botanical or zoological studies, and at the same time made holiday in true camping spirit. The botanical section, under the leadership of Mr. Redway, had a busy time. As regards the zoology, we were unable to undertake any marine dredging work this year, owing to the lack of a suitable boat. It is also to be regretted that the native mammalian fauna of Tasmania cannot be studied without long excursions being made into the less settled parts of the bush. The present indiscriminate destruction of our native fauna is a matter that demands immediate attention if we are to preserve certain species from extinction. One day during the camp a number of us spent digging in the sandhills in an endeavour to locate some more aboriginal remains, as a few months ago I had removed portions of about a score of skeletons from this locality to the Tasmanian Museum (as reported in the proceedings of the Royal Society of Tasmania for 1918). We now long for relics of the extinct Tasmania aboriginals, and they have a high scientific value. But we do not take heed of the teaching of history. Unless active steps are taken, many highly interesting forms of our native fauna will soon be as extinct as the Tasmanian aboriginal and the Tasmanian emu.

Better protection should also be afforded our natural beauty spots. The wonders of the Blowhole and Tasman's Arch attract thousands of tourists to this locality, and the native flora around these places should be preserved. Instead of this, we found the country cleared by fire. A pretty patch of native trees near the Blowhole was burnt out on Easter Sunday, and was evidently wilfully set on fire. As well as better protection being afforded to safeguard the natural features, a little expendi-



AT CASH'S LOOK-OUT.



THE RISING TIDE.

ture in cutting tracks to such places as Cash's Lookout would well repay the small outlay. Since our last visit considerable improvements have been carried out by the Scenery Preservation Board, but the district is worthy of even more being done.

And as each day passed and the autumn sun sank behind the hills, the various parties would return. The open air life was responsible for the anxious glances cast towards the dining tent, where the acetylene flares would soon be burning brightly and the campers exchanging accounts of the day's outings.

As the Easter moon rose from the sea and illuminated the white shapes of the tents among the trees, a huge camp fire would be set alight, and the forests would ring with the melody of the camp choruses and songs. To the musical members of the party we were indebted very considerably, for it is to them that our thanks must be accord-

ed for many pleasant hours spent around the camp fire. The musical selections would be interspersed with nature talks and other topics. After supper the company would gradually diminish, and the members retire to their tents, to be lulled to sleep by the rhythmic beat of the surge upon the shore.

And so the time passed all too quickly, and many were the regrets expressed when Tuesday afternoon arrived, and it was time to leave. All set to work with a will, however, and the miniature village and its occupants disappeared as though by a magician's wand. All were aboard the s.s. *Cartela* by 4 o'clock, and a start made for home. After calling at several ports, Hobart was reached at 10.30, after a most pleasant trip. The calm and enjoyable return voyage was a fitting termination to the pleasant days that we had spent during the recent camp, and in this manner the fifteenth annual camp of the Field Naturalists' Club came to an end.

BOTANICAL NOTES

By L. Rodway, C.M.G., Government Botanist

This is the second time within the last few years that the F.N.C. has made its Easter camp in the vicinity of Eaglehawk Neck, the former occasion being in April, 1916. In the report of that event may be found some reference to the encalypts, orchids, ferns, and dune-flora found there. One of the most interesting groups of flowering plants we have in Tasmania is that known as the Protea family. This is a large, but perfectly natural, family, and was given the name Protea on account of the great diversity of forms of the plants included in it. Proteas are common throughout the Southern hemisphere, and they spread to tropical Asia and up through the countries bordering on the Pacific, as far north as Japan. There is one feature common to all members of the family, namely, a redneck or leathery condition of the foliage, with very sunken pores. This structure is evidently an adaptation to a dry climate where the reduction of evaporation is a prime necessity.

Waratah is a typical proteaceous plant, and to understand the structure of its flower is to recognise all members of the family. The flowers may be in loose or dense clusters; they may be single or in dense heads, but if we learn the structure of one proteaceous flower

we shall be able to recognise any member of the group, for in Tasmania no other flower is formed like it. The flower possesses but one floral envelope, and this is split into four sections. Each section of this perianth bears a stamen in a depression near its tip. In the middle of the flower is a single linear body, very like the same organs in a pea-flower, which will develop into the fruit. In the vicinity of our camp there were six members of the family. Waratah, with its crimson flowers, needs no further description. There were two species of *Hakea*, *H. pugioniformis* was common. It was rigid and prickly, and would form an excellent hedge; the fruit is shaped somewhat like a dagger. The other *Hakea* occurred at the top of Cash's Lookout. It had a small sigmoid fruit. This to a vivid imagination has somewhat the appearance of the human larynx, on which it has received the inappropriate name of *H. epiglottis*. The foliage of these *Hakeas* is reduced to linear spines on account of which they have been sometimes mistaken for pines.

Another common protea was a little shrub with rather fern-like leaves. It is commonly called Fairy-fern, which is unfortunate, as it is not at all related to the ferns. The fruit, when open, is

THE TESSELATED PAVEMENT.



very like a guitar, and the name guitar plant is much more suitable. The flowers are in loose clusters, creamy white, and in structure exactly like the flowers of waratah. The scientific name is *Lomatia*, which is easy enough to be used as a popular name. Another member of the family on the lower slopes of Cash's Lookout was *Persoonia*. The leaves were numerous, about half an inch long, linear, and very sharp. The flowers were yellow, and single at the base of a few of the leaves; the fruit is a dark berry.

The only other member of the family observed was the common honeysuckle. This is an unsatisfactory name, for it is no relation to or at all like the honeysuckle of the Old Country. It is named *Banksia*, after Sir Joseph Banks, who well earned distinction as a botanist in the early days of Australian exploration.

Banksia is easy and euphonious, and every effort should be made to encourage its use. The flowers in *Banksia* are clustered into dense oblong heads, but if a flower be dissected out it will be found to be built just as in waratah. A tree which we do not devote much attention to, simply because it is so common, is sheoak. Yet this is to the botanist perhaps the most interesting tree in Australia, or rather its family the *Casuarinas* deserves this distinction. It is a unique type of vegetation, clearly of the flowering division known as dicotyls, it has the general appearance of a conifer. The water conserving design of its anatomy reaches the limit of effectiveness, and under what conditions it can have been evolved can only be conjectured to have been of persistent drought.

GEOLOGICAL NOTES

By W. H. Clemes, B.A., B.Sc.

The geology of Eaglehawk Neck, though extremely simple, is nevertheless very interesting. The main features of interest are the structures and fossils to be found in the Permo-carboniferous mudstones, which are well-developed along the coast. The cliffs have bold vertical faces, somewhat quaintly sculptured owing to the regular jointing, and reaching upwards in places to the height of fully 1,000 feet, but the bare rock is often beautified and screened by the clinging vegetation, which finds a precarious foothold on the ledges hollowed out by the moist sea winds. The horizontal bedding planes and vertical joints would lead one to imagine that the cliffs were the work of titanic builders, labouring to protect the land from the fierce assault of the waves, and building a wall that would reach even to the skies. The foundations must have been badly laid, as numerous faults are visible, and the beds are sometimes slightly dipping to the south-east. The lower beds are gritty conglomerates, whose studded surface bears eloquent testimony to the cold of the early Permo-carboniferous age. The stones were transported there by the ice floes, which abounded in that great bay which includes most of what is now South-Eastern Tasmania, and whose melting caused them to sink down to the mud of that ancient sea-floor.

Granite blocks are there, brought from the distant granite fringe far out to sea, together with rocks from still older formations which have since disappeared. These basal beds have become curiously jointed, the joints being filled with ferruginous material. This is seen to the best advantage at the Tessellated Pavement, where the cross-jointing is most regular. This is probably due to a mass of igneous material which was intruded into the rock immediately beneath the portion now visible. The surrounding rock was raised to a high temperature, and, on cooling, took on the jointing of the intruded rock.

The jointing along the lines of weakness has led to the formation of numerous caves, arches, and chimney rocks. On the basal beds is resting a curious band of gritty sandstone, which appears faulted to different levels along the coast. Above this comes a zone filled with the remains of marine life, which again is succeeded by an almost barren zone. The chief fossils are *Spirifer convoluta*, *S. darwini*, *Productus brachythaerus*, *Platyschisma ocula*, *Sanguinolites etheridgei*, and the various *Stenopora* and *Fenestellæ* together with *Protoretzpora ampla*.

The mudstones are succeeded by Jurassic sandstones of the usual type. Cretaceous diabase has forced its way through the overlying strata, and is



EAGLEHAWK NECK, LOOKING SOUTH-EAST.

now found capping the surrounding hills. Later sand-dunes fringe the bay and form the neck itself, a product of comparatively recent origin. The sinking of the land to the south of Tasmania diverted the drainage from the Tasman Basin into the "drowned valley" of Storm Bay, and permitted the silling up of the entrance to the former channel, the rift valley of Eaglehawk Bay. The sinking of the land

to the east permitted an invasion of the sea, and the excessive erosion has resulted in the Hippolyte Rocks being isolated ten miles out to sea. These granite rocks are reported to be the home of numerous seals and seabirds. A diabase sheet to the south is responsible for the curious "Lanterns" of Fortescue Bay, and the beautiful scenery of Cape Pillar and its vicinity.

ORNITHOLOGICAL NOTES

By Clive E. Lord, Curator of the Tasmanian Museum

Taking into consideration the beautiful weather experienced this Easter, it is only natural to assume that Nature adorned herself for the occasion, as far as was in her power at this period of the year. To relieve the dull autumn green of the eucalypts and beeches, the living gems of the forests—the gaily coloured birds—added the final touch to an already beautiful scene.

Camped as we were at the foot of a high wooded ridge, which sloped eastwards to the seashore, we were away from the haunts of the semi-aquatic and wading birds, but the birds of the ocean were never far away. Looking across the bay, gulls, terns, cormorants, and penguins could usually be seen, while further out the gannets plunged from the heights to secure their food, or the majestic albatross soared aloft. Around the shores patrolled a pair of sea eagles (*H. leucogaster*), while over the ridge behind the camp a wedge-tailed eagle (*A. audax*) wheeled in stately circles, and a brown hawk (*B. herigora*) flew at a lower altitude.

Occasionally the harsh notes of a flock of black cockatoos (*C. xanthopus*) would echo through the timber while around the camp numerous green parrots (*P. flaviventris*) were always in evidence. To add to the colour effect, several rosellas (*P. eximius*) would dart from tree to tree, their bright plumage showing to good effect in the sunlight.

Around the camp the robins (*P. leggi* and *P. phoenicea*) added a touch of colour as the male birds appeared in the full glory of their new autumn plumage. An occasional dusky robin (*A. vittata*) was also observed. Our two Tasmanian species of whistlers, the grey-tailed (*P. glaucura*) and the olive (*P. olivacea*) added their quota to the melody of the avi-

fannan choir, while the erratic actions and quaint notes of the dusky fantail (*R. diemensis*) were studied by all who visited the creek which ran by the camp.

Both the yellow-tailed (*A. chrysorrhoa*) and the brown-tailed acanthizids (*A. diemensis*) were common, while the blue wren (*M. longicaudus*) appeared to be fairly so. The liquid notes of the whistling shrike thrush (*C. selbii*) were typical of the locality, and the rich and resounding notes of this species were in marked contrast to the plaintive notes of the pardalotes, which issued from the gums.

The largest family gathering represented were the honeyeaters (*meliphagidae*), of which no less than seven species were noted, the majority in close proximity to the camp. The strong-billed (*M. validirostris*) and the black cap (*M. melanoccephalus*) were around in numbers, while amid the lower vegetation the Tasmanian spinebill (*A. dubius*) flitted from tree to tree. Both the yellow-throat (*P. flavicollis*) and the crescent honeyeater (*L. australasiana*) were often to be seen, as well as an occasional New Holland honeyeater (*M. novaehollandiae*). On one occasion even a wattle-bird (*A. inauris*) was noted. We did not observe many ravens (*C. australis*) during our stay, but that fine songster, the lesser white-backed magpie (*G. organicum*) added his song to the general melody of the birds. While the district under review does not lend itself as a home for many forms of bird life, several interesting forms were noted, and while the foregoing is by no means a complete list of all the species observed, it will serve to give a good idea of the general grouping of the avifauna of the locality in which we were camped.



PREPARING TO LEAVE.

NATIONAL MUSEUM, WASHINGTON, D. C.



CREEK SCENE, NEAR THE BLOWHOLE.

The Mercury Office.